

South Dakota Youth Tobacco Survey 2003



GRADES 6 - 8 AND 9 - 12

UPDATED EDITION DECEMBER 2004



REPORT PREPARED FOR THE
South Dakota Department of Health
Tobacco Control Program
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The South Dakota Department of Health wishes to thank the school districts that graciously gave their time and energy to implement the survey in their classrooms.

EXECUTIVE SUMMARY

INTRODUCTION

Tobacco use remains the greatest cause of preventable death in South Dakota and the United States. One in every five deaths is tobacco related (McGinnis 1993). More than 1,725 South Dakotans die from a tobacco-related disease each year. In addition, direct medical costs, lost productivity due to tobacco related diseases, and serious respiratory problems for those exposed to other environmental tobacco smoke are consequences of tobacco use. Most adult tobacco users (80%) began using as a teenager (USDHHS 1994).

In 2003, the South Dakota Tobacco Control Program conducted a youth tobacco survey among Middle School and High School students in the state. The South Dakota Youth Tobacco Survey (SDYTS) is a comprehensive survey of tobacco use, access to tobacco, cessation, knowledge and attitudes about tobacco, and exposure to environmental tobacco smoke among South Dakota youth. The SDYTS provides useful information to guide youth tobacco prevention, cessation, and control efforts in the state. It also provides valuable data that can be used to track trends among South Dakota youth over time.

The goals of the South Dakota Tobacco Control Program are to 1) prevent young people from starting to use tobacco products, 2) persuade and help smokers to stop smoking, and 3) protect non-smokers by reducing their exposure to environmental tobacco smoke. The results of the SDYTS provide information that can be used to measure progress toward these goals and prioritize future work necessary to sustain gains and improve services to meet these goals.

METHODOLOGY

The SDYTS consists of 69 questions developed by the Centers for Disease Control and Prevention (CDC) and the South Dakota Tobacco Control Program. Numerous states use the CDC's core questions and survey administration procedures, allowing findings from the SDYTS to be compared with findings from other states and the National Youth Tobacco Survey. In South Dakota, the survey was administered to 2,481 students from 35 middle schools and 1,920 students from 21 high schools between September and December, 2003. This is the first year that data on ethnic background has been made available by CDC. Eighty-five percent of the middle school sample identified themselves as White, 10% as American Indian and less than 5% as other. Eighty-nine percent of the high school sample identified themselves as White, 8% as American Indian and approximately 3% as other.

FINDINGS

Results from the SDYTS provide valuable information on the student population about the prevalence of tobacco use, attitudes about tobacco, future intentions about tobacco use, exposure to environmental tobacco smoke, and desire of current smokers to stop smoking. Findings are organized in a way that will allow policy makers, health educators, parents, and others concerned about youth health to answer a series of key questions.

How many young people in South Dakota are currently using tobacco and how many have smoked daily or have ever used smokeless tobacco?

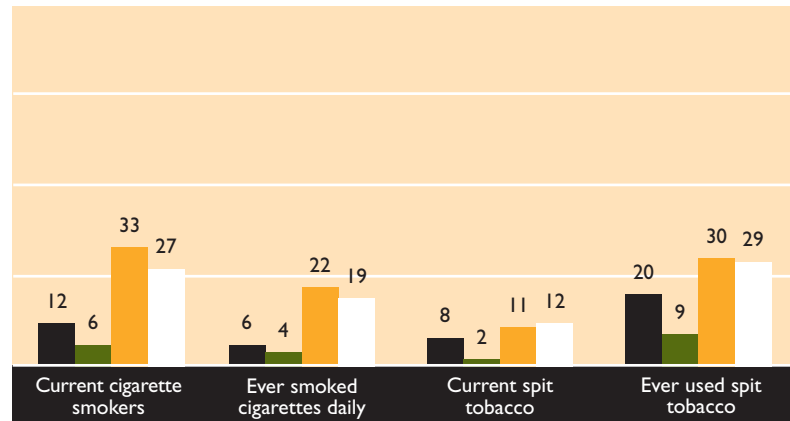
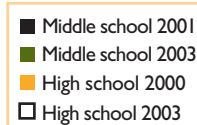
Most South Dakota youth do not use tobacco. Only 6% of middle school students and 27% of high school students are defined as current smokers, meaning that they have smoked a cigarette on one or more days during the past 30 days (see Table 1). Rates of current smoking at the middle school show a significant decline since 2001. Rates of current smoking at the high school level also show a slight downward trend since the last administration of the SDYTS; however, the decline is not statistically significant.

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Daily smoking varies by grade level. Among middle school students, only 4% report ever smoking at least one cigarette daily for 30 days compared to 19% of high school students. Students at both the middle school and high school levels report slightly lower rates of daily cigarette use since the last administration of the SDYTS; however, the decline is not statistically significant at either level.

Fewer students report using spit tobacco than cigarettes and the use of spit tobacco products (chew, snuff, or dip) has decreased significantly among middle school students over the past few years. The percentage of high school students who have ever used spit tobacco has stayed fairly stable, however. More American Indian students than White students at both the middle school and high school levels report using both cigarettes and spit tobacco.

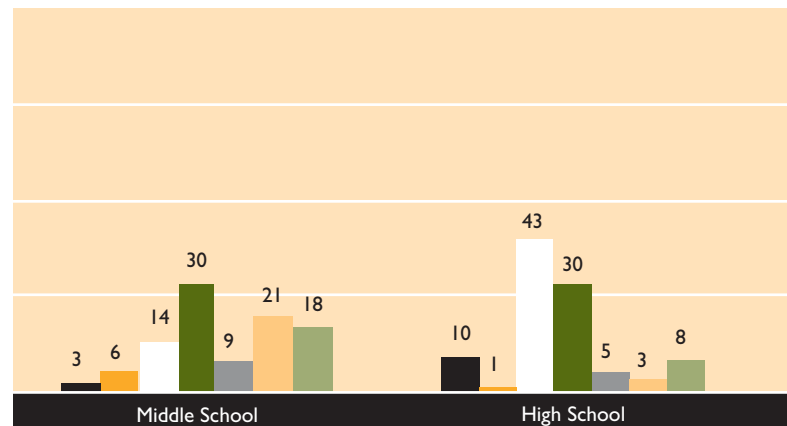
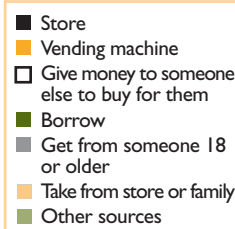
TABLE 1.
Smoking and spit tobacco use patterns among middle and high school students.



How do young people in South Dakota get tobacco products?

Most young people that obtain tobacco products do so by borrowing them from friends or giving money to someone else to buy for them (see Table 2). White students at both the middle school and high school levels are more likely than American Indian students to buy cigarettes from a vending machine. American Indian high school students are less likely than White students to take cigarettes from a store or family.

TABLE 2.
Usual source of cigarettes for current smokers under age 18.

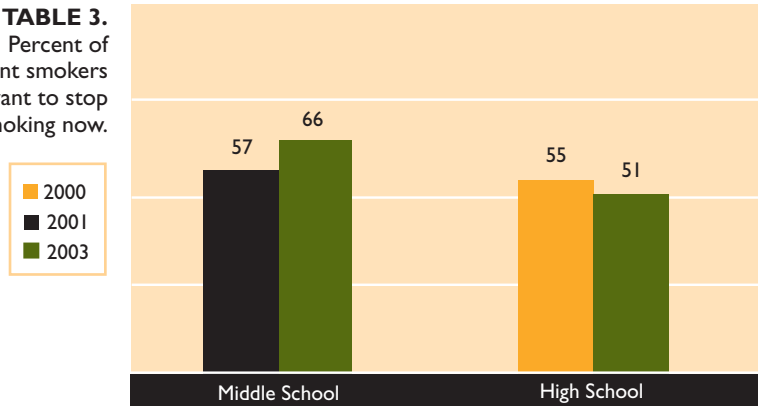


EXECUTIVE SUMMARY

How many current smokers in South Dakota schools would like to stop smoking?

The majority of current smokers at both the middle school and high school levels would like to stop smoking (see Table 3). More American Indian students than White students at both the middle school and high school levels want to stop smoking now. Although the majority of current smokers would like to stop, less than 15 percent of all students who have ever smoked have ever participated in a program to help them quit using tobacco.

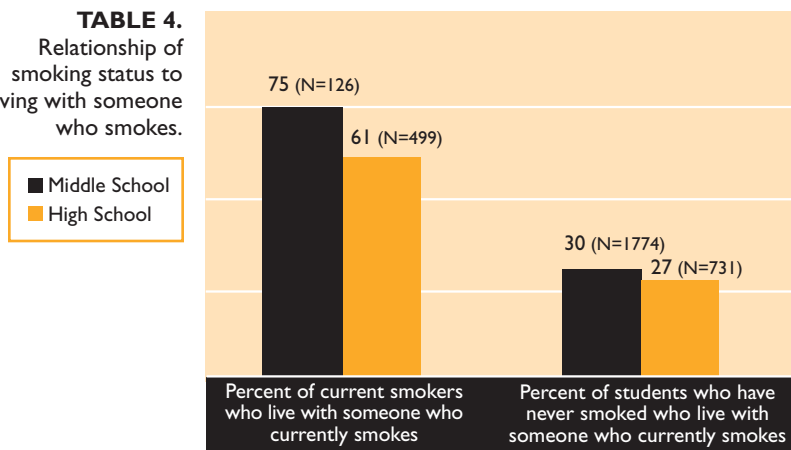
TABLE 3.
Percent of
current smokers
who want to stop
smoking now.



How are smoking status and exposure to environmental tobacco smoke related?

Students who are current smokers are more likely to live in a home with someone who smokes (see Table 4).

TABLE 4.
Relationship of
smoking status to
living with someone
who smokes.



INTRODUCTION

Tobacco use remains the greatest cause of preventable death in South Dakota and the United States. One in every five deaths is tobacco related (McGinnis 1993). More than 1,725 South Dakotans die from a tobacco-related disease each year. In addition, direct medical costs, lost productivity due to tobacco-related diseases, and serious respiratory problems for those exposed to other environmental tobacco smoke are consequences of tobacco use. Most adult tobacco users (80%) begin using as a teenager (USDHHS 1994).

In 2003, the South Dakota Tobacco Control Program conducted a youth tobacco survey among Middle School and High School students in the state. The South Dakota Youth Tobacco Survey (SDYTS) is a comprehensive survey of tobacco use, access to tobacco, cessation, knowledge and attitudes about tobacco, and exposure to environmental tobacco smoke among South Dakota youth. The SDYTS provides useful information to guide youth tobacco prevention, cessation, and control efforts in the state. It also provides valuable data that can be used to track trends among South Dakota youth over time.

The goals of the South Dakota Tobacco Control Program are to 1) prevent young people from starting to use tobacco products, 2) persuade and help smokers to stop smoking, and 3) protect non-smokers by reducing their exposure to environmental tobacco smoke. These goals are consistent with the Centers for Disease Control and Prevention (CDC) comprehensive tobacco control goals for the United States. The results of the SDYTS provide information that can be used to measure progress toward these goals and prioritize future work necessary to sustain gains and improve services to meet these goals.

METHODOLOGY

The SDYTS, conducted in 2003, consists of 69 questions developed by the CDC and the South Dakota Tobacco Control Program. Numerous states use the CDC's core questions and survey administration procedures, allowing findings from the SDYTS to be compared with findings from other states and the National Youth Tobacco Survey.

The SDYTS was administered to 2,481 students from 35 middle schools and 1,920 students from 21 high schools between September and December, 2003. This is the first year that data on ethnic background has been made available by CDC. Eighty-five percent of the middle school sample identified themselves as White, 10% as American Indian and less than 5% as other. Eighty-nine percent of the high school sample identified themselves as White, 8% as American Indian and approximately 3% as other. The sample of students selected to complete the survey was drawn using a two-stage cluster sampling design. This method of selecting students increases the likelihood that survey results are representative of all students in South Dakota. Further, the number of students selected to participate that completed a useable survey was high at both the middle school and high school level. Therefore, the results of this survey can be used to make important inferences about tobacco use risk behaviors of all public school students in grades 6–12 throughout South Dakota.

Students were assured that the procedures used to conduct the survey were designed to protect anonymity. For a more detailed description of the survey methodology including the sampling design, weighting of data, and response rates, see Appendix 1.

FINDINGS

Results from the SDYTS provide valuable information on the student population about the prevalence of tobacco use, attitudes about tobacco, future intentions about tobacco use, exposure to environmental tobacco smoke, and desire of current smokers to stop smoking. Because smoking experimentation principally starts during adolescence, this report summarizes highlights of the survey that have implications for focusing prevention efforts toward

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students (Mowery 2004). The findings from the SDYTS are organized in a way that will allow policy makers, health educators, parents, and others concerned about youth health to answer a series of key questions.

How many young people in South Dakota are using tobacco and how many use it everyday?

Most South Dakota youth do not use tobacco. Only 5% of 6th grade students and 34% of high school seniors are defined as current smokers, meaning that they have smoked a cigarette on one or more days during the past 30 days (see Tables 1 and 2). The rates of use increase consistently with grade level, which suggests that there are continuing opportunities for prevention efforts, especially throughout the middle school years. Rates of current smoking at the middle school level show a significant decline since 2001. Rates of current smoking at the high school level also show a slight downward trend since the last administration of the SDYTS; however, the decline is not statistically significant.

TABLE 1.
Percent of middle school students defined as current smokers (smoked on 1 or more days in the past 30 days).

YEAR (sample size)
 1999 (1930)
 2001 (2379)
 2003 (2412)

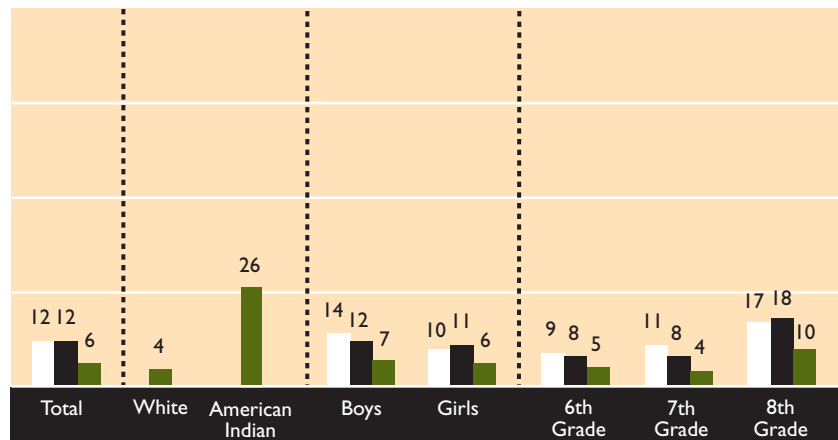
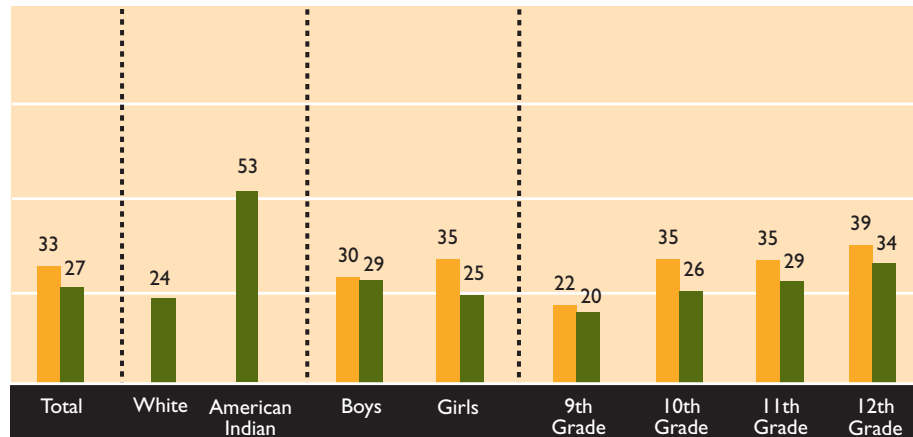


TABLE 2.
Percent of high school students defined as current smokers (smoked on 1 or more days in past 30 days).

YEAR (sample size)
 2000 (1485)
 2003 (1849)



The number of middle school students who described themselves as White in 2003 was 2051. The number of high school students who described themselves as White in 2003 was 1500. The number of middle school students who described themselves as American Indian in 2003 was 235. The number of high school students who described themselves as American Indian in 2003 was 258.

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Daily smoking also varies by grade level. Among 6th graders, only 3% report ever smoking at least one cigarette daily compared to 26% of high school seniors (see Tables 3 and 4). Students at both the middle school and high school levels report slightly lower rates of daily cigarette use since the last administration of the SDYTS; however, the decline is not statistically significant at either level.

Fewer students report using spit tobacco than cigarettes and the use of spit tobacco products (chew, snuff, or dip) has decreased significantly among middle school students over the past few years (see Tables 5, 6, 7 and 8). Males are more likely to report the use of spit tobacco than females.

TABLE 3.
Percent of middle school students who have ever smoked cigarettes daily (at least 1 cigarette everyday for 30 days).

YEAR (sample size)
 1999 (1912)
 2001 (2407)
 2003 (2425)

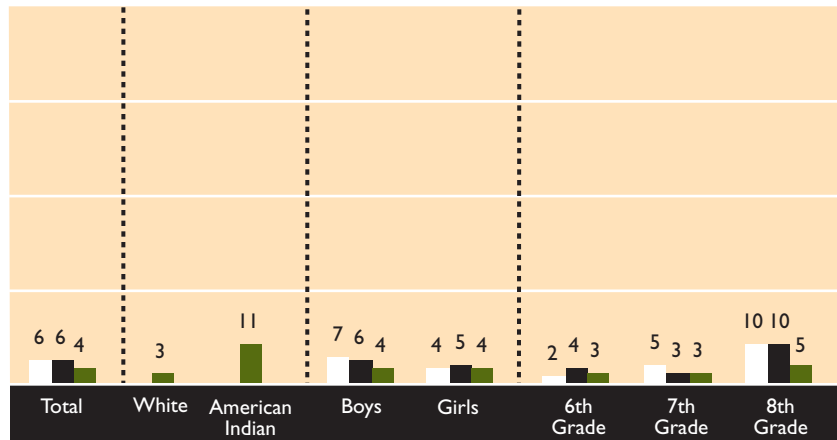


TABLE 4.
Percent of high school students who have ever smoked cigarettes daily (at least 1 cigarette everyday for 30 days).

YEAR (sample size)
 2000 (1489)
 2003 (1867)

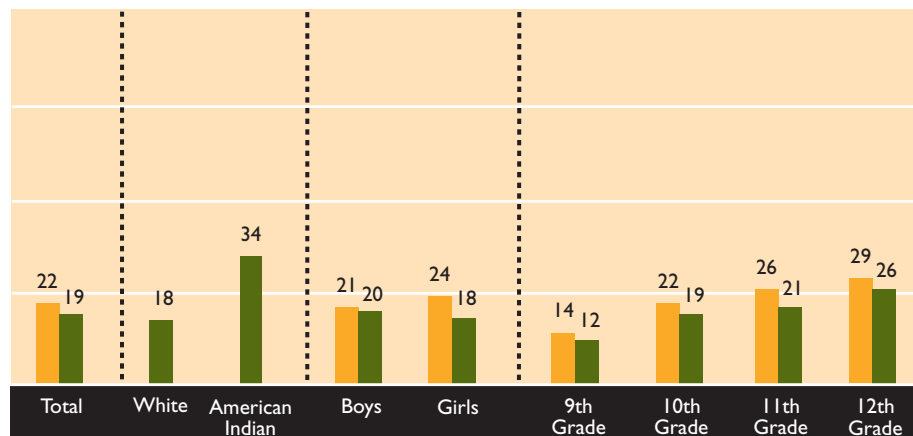
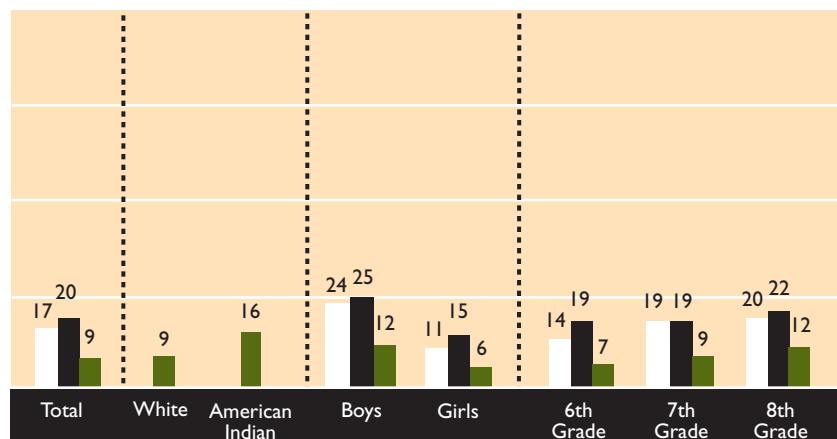


TABLE 5.
Percent of middle school students who have ever used spit tobacco.

YEAR (sample size)
 1999 (1930)
 2001 (2414)
 2003 (2448)



REPORT ON KEY QUESTIONS

In comparison to national data gathered on the Youth Risk Behavior Surveillance System (YRBSS) (Grunbaum, 2004), South Dakota high school students report higher rates of tobacco use: Current smokers of cigarettes (27% in South Dakota, 22% nationally), Daily cigarette smokers (19% in South Dakota, 16% nationally), and Current smokeless tobacco users (12% in South Dakota, 7% nationally) (see Tables 2, 4 and 8).

TABLE 6.
Percent of high school students who have ever used spit tobacco.

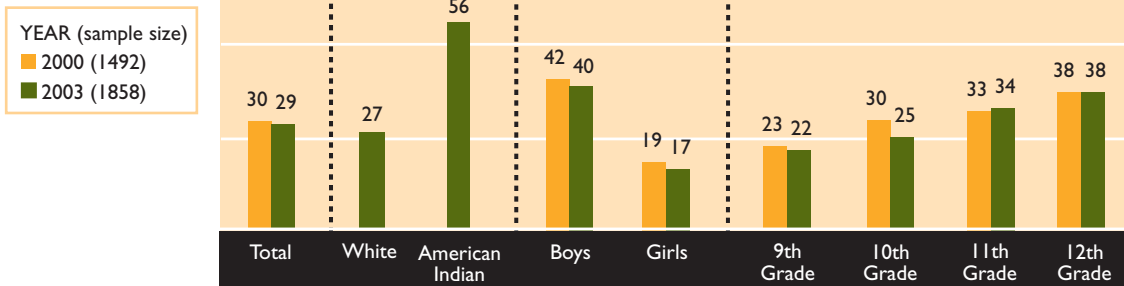


TABLE 7.
Percent of middle school students who currently use spit tobacco (1 or more days in past 30 days).

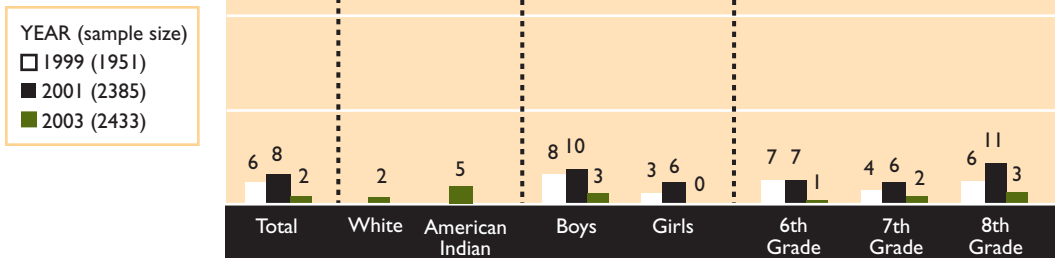
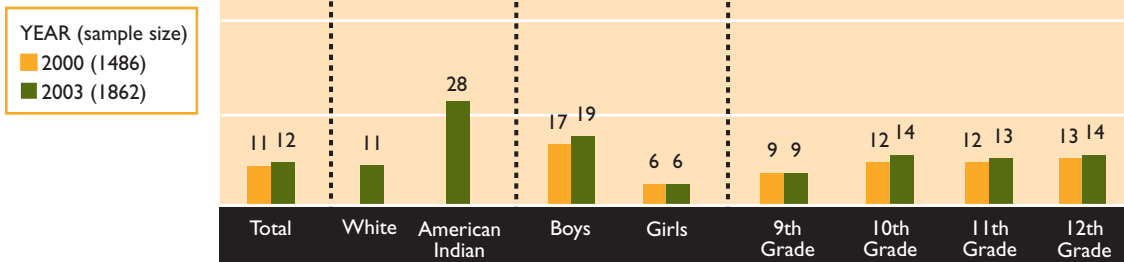


TABLE 8.
Percent of high school students who currently use spit tobacco (1 or more days in past 30 days).



REPORT ON KEY QUESTIONS

What do students believe about the risks of tobacco use?

Students who recognize the risks of any drug use are less likely to use that drug (Johnston, et al, 2003). When asked if people can get addicted to using tobacco, over two-thirds of students at both the middle school and high school levels responded “definitely yes.” However, approximately one in five students respond that this is only “probably” true. The vast majority also recognize the risks involved in smoking 1 to 5 cigarettes per day and do not believe that it is “safe to smoke only for a year or two as long as you quit after that.” Students at both levels recognize that smokeless tobacco is not safer than cigarettes (see Tables 9 and 10).

TABLE 9a.
Percent of middle school students who believe you can get addicted to using tobacco.

■ Definitely yes
■ Probably yes

N=2452

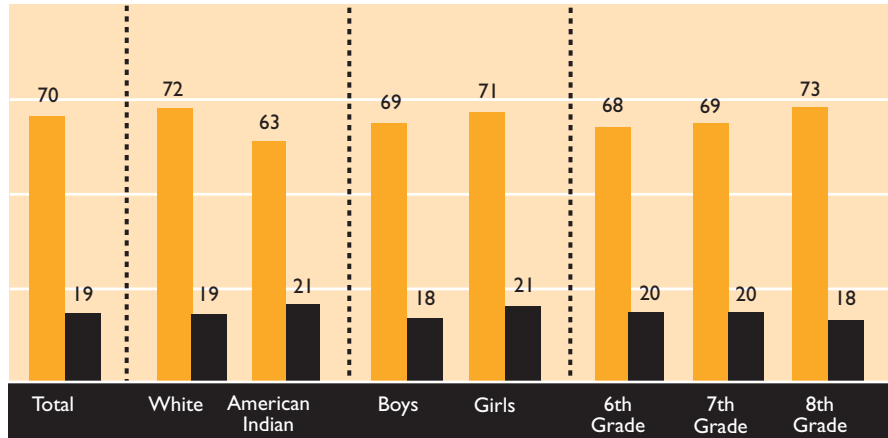


TABLE 9b.
Percent of middle school students who believe young people risk harming themselves if they smoke 1-5 cigarettes per day.

■ Definitely yes
■ Probably yes

N=2454

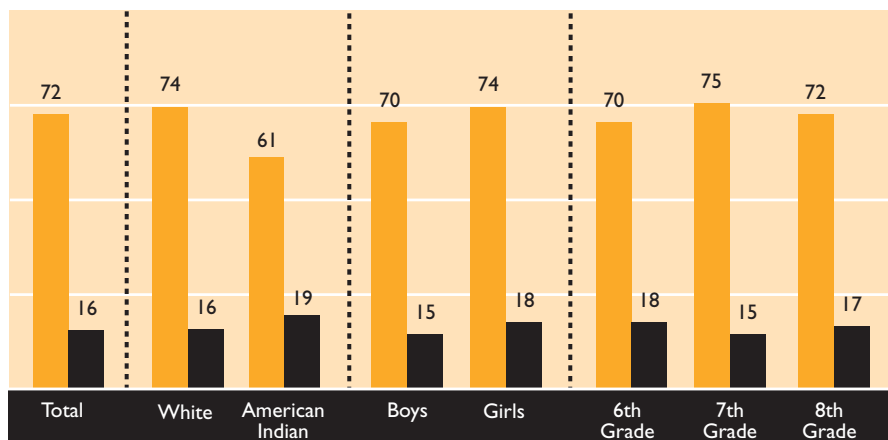
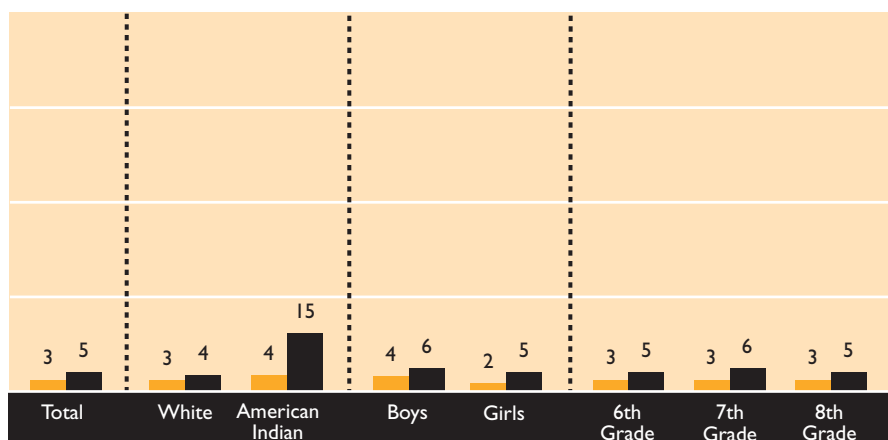


TABLE 9c.
Percent of middle school students who believe it is safe to smoke only for a year or two, as long as you quit after that.

■ Definitely yes
■ Probably yes

N=2440



REPORT ON KEY QUESTIONS

TABLE 9d.
Percent of middle school students who believe that spit tobacco is safer than cigarettes.

■ Definitely yes
■ Probably yes

N=2446

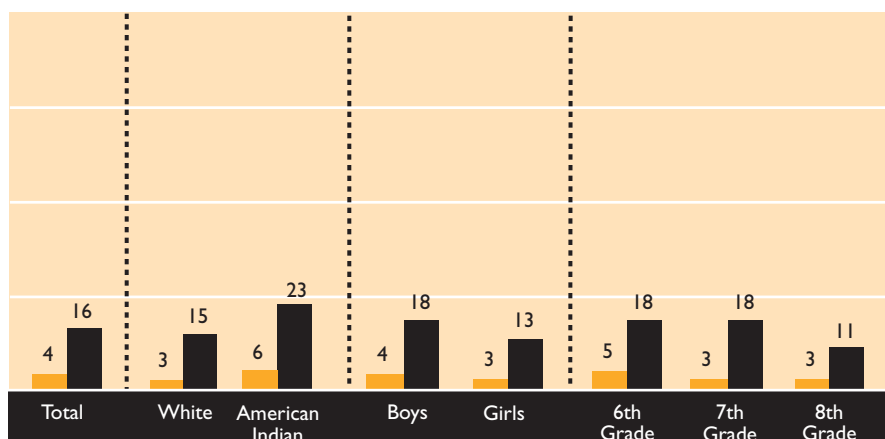


TABLE 10a.
Percent of high school students who believe you can get addicted to using tobacco.

■ Definitely yes
■ Probably yes

N=1894

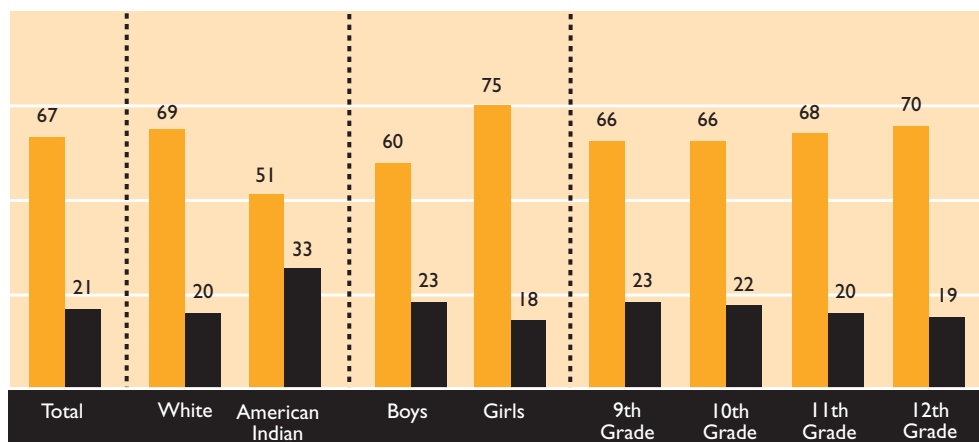
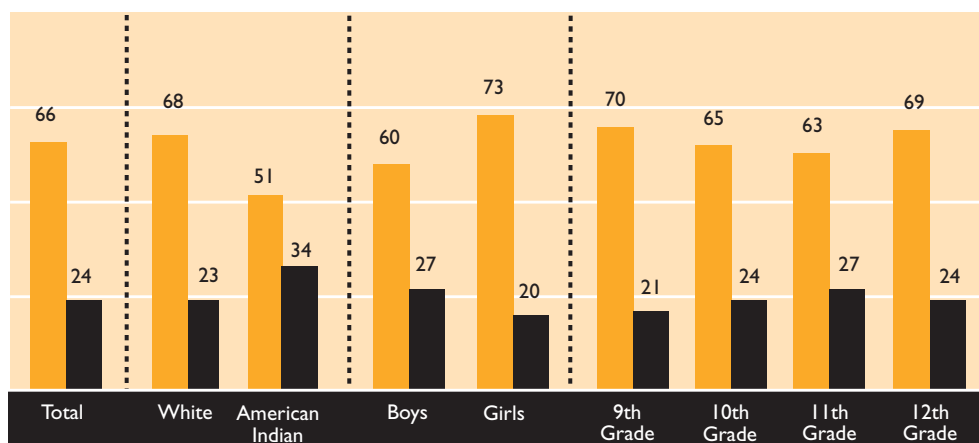


TABLE 10b.
Percent of high school students who believe young people risk harming themselves if they smoke 1-5 cigarettes per day.

■ Definitely yes
■ Probably yes

N=1889



REPORT ON KEY QUESTIONS

TABLE 10c.
Percent of high school students who believe it is safe to smoke only for a year or two, as long as you quit after that.

Definitely yes
Probably yes

N=1886

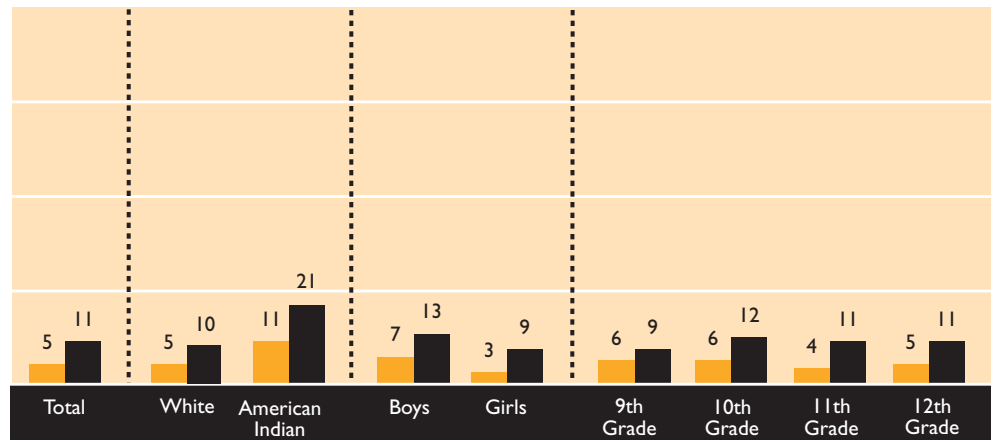
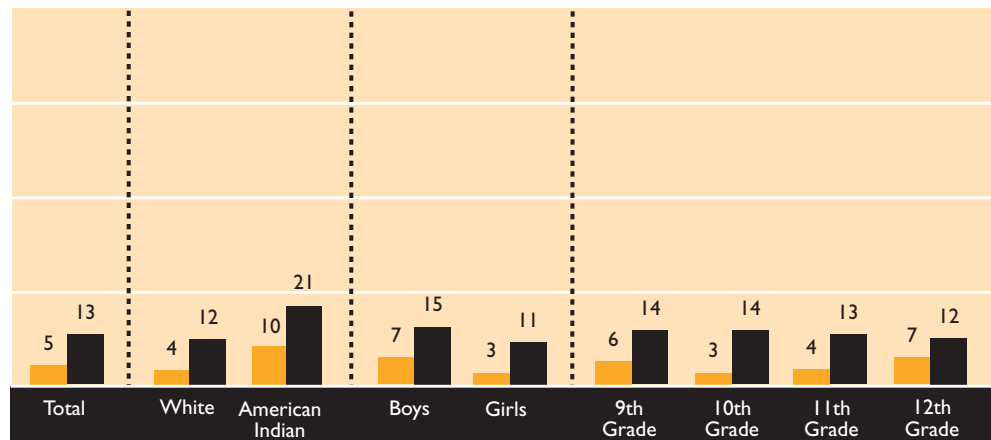


TABLE 10d.
Percent of high school students who believe that spit tobacco is safer than cigarettes.

Definitely yes
Probably yes

N=1891

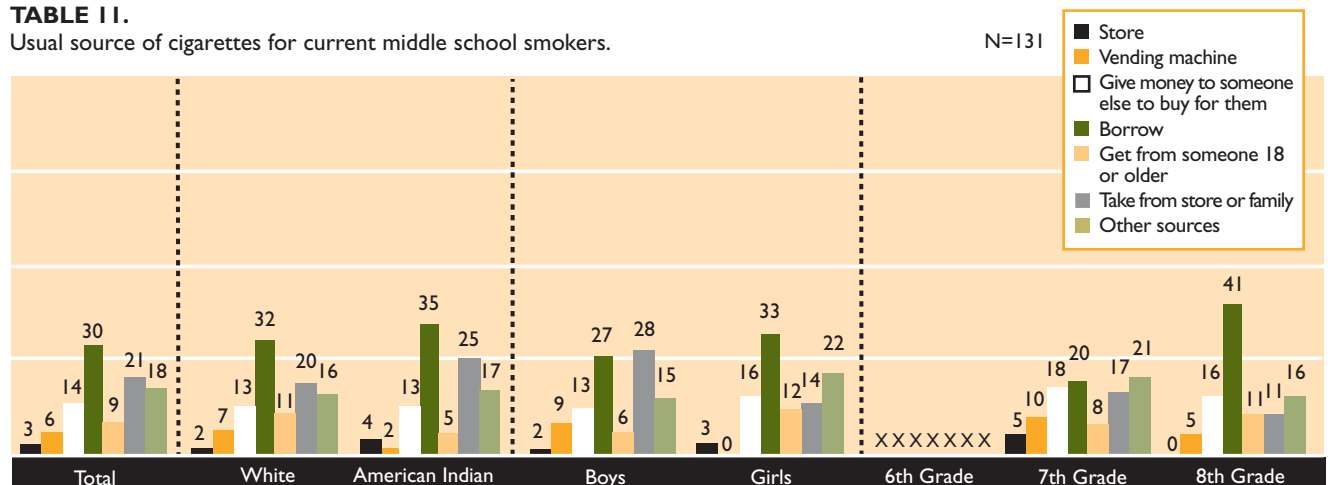


How do young people in South Dakota get tobacco products?

Most young people that obtain tobacco products do so by borrowing them from friends or getting someone 18 or older to buy them (see Tables 11 and 12). Only 3% of middle schools students and 10% of high school students under age 18 who are current smokers bought cigarettes in a store during the past 30 days.

TABLE 11.
Usual source of cigarettes for current middle school smokers.

N=131



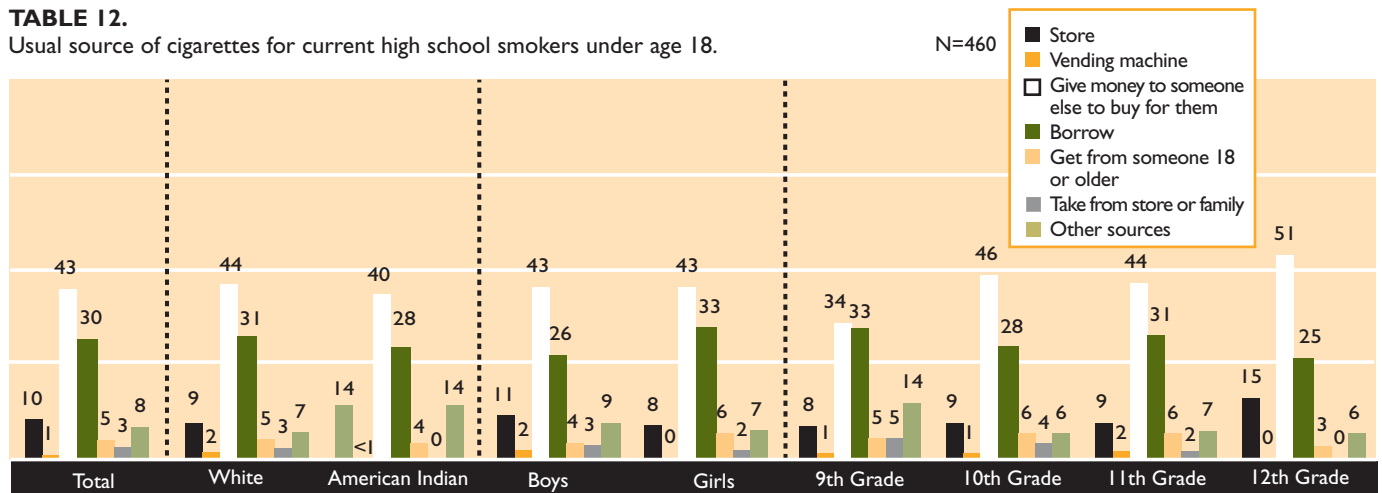
X = too small to report

REPORT ON KEY QUESTIONS

TABLE 12.

Usual source of cigarettes for current high school smokers under age 18.

N=460



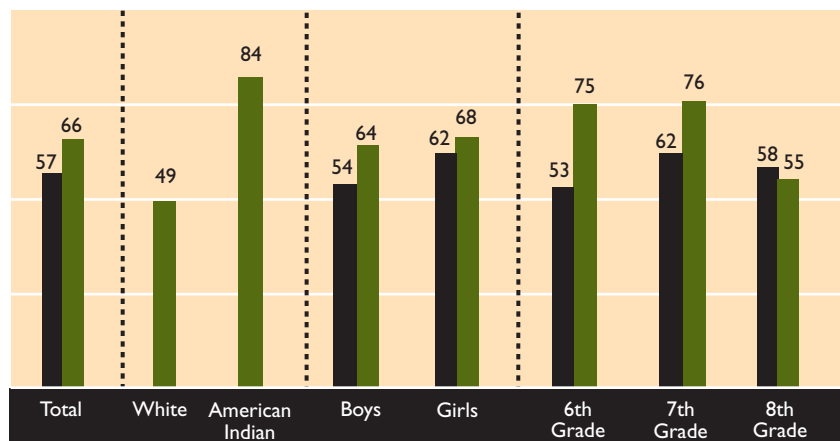
How many current smokers in South Dakota schools would like to stop smoking?

The majority of current smokers at both the middle school and high school levels would like to stop smoking (see Tables 13 and 14). Most current smokers have also tried to quit smoking at least once during the past 12 months (see Tables 15 and 16). Most students who want to quit or who have tried to quit have not participated in a program to help quit using tobacco (see Tables 17 and 18). Slightly more than 10% of both middle school and high school students report attending a school that has a special group or class for students who want to quit using tobacco. Approximately half of all students are not sure if their school offers this type of program (see Tables 19 and 20).

TABLE 13.

Percent of current middle school smokers who want to stop smoking now.

YEAR (sample size)
1999 (not available)
2001 (205)
2003 (101)



REPORT ON KEY QUESTIONS

TABLE 14.
Percent of current
high school student
smokers who want
to stop smoking now.

YEAR (sample size)
2000 (386)
2003 (419)

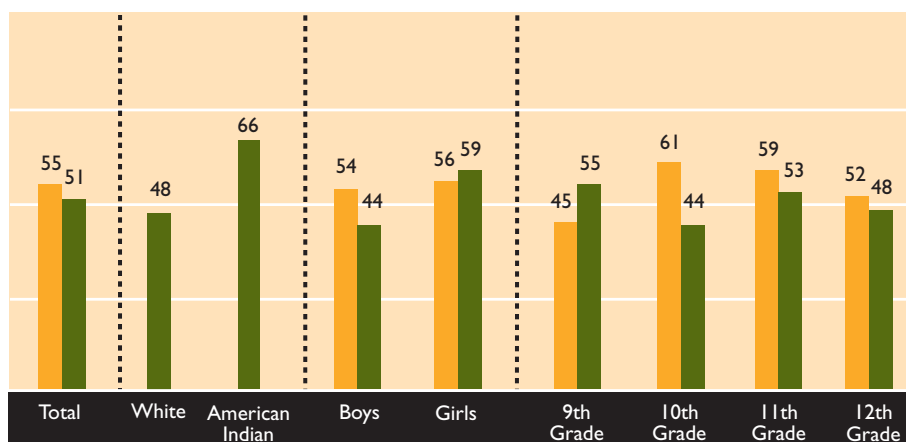


TABLE 15.
Percent of current
middle school
smokers who have
ever tried to quit
smoking during the
past 12 months.

YEAR (sample size)
1999 (not available)
2001 (239)
2003 (119)

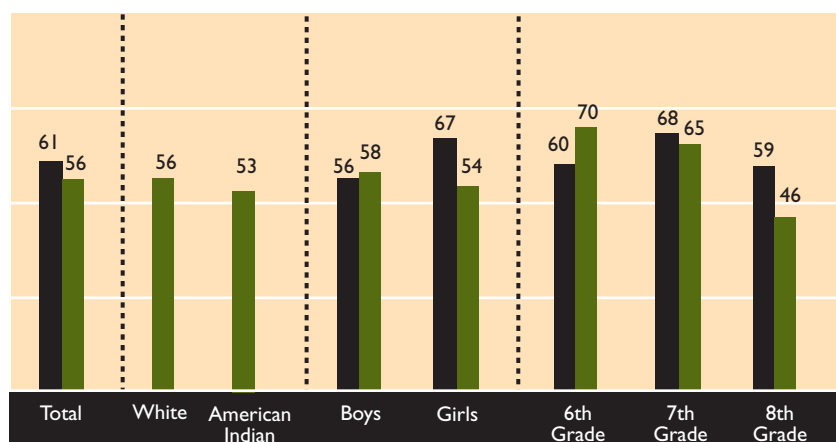
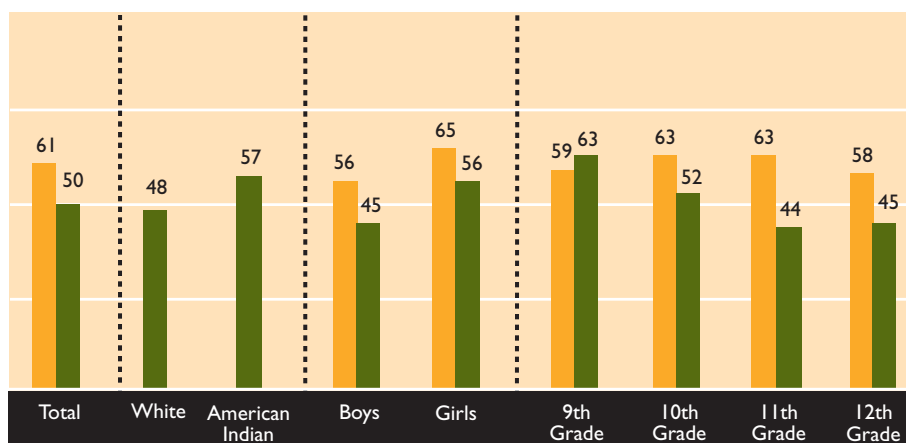


TABLE 16.
Percent of current
high school student
smokers who have
ever tried to quit
smoking during the
past 12 months.

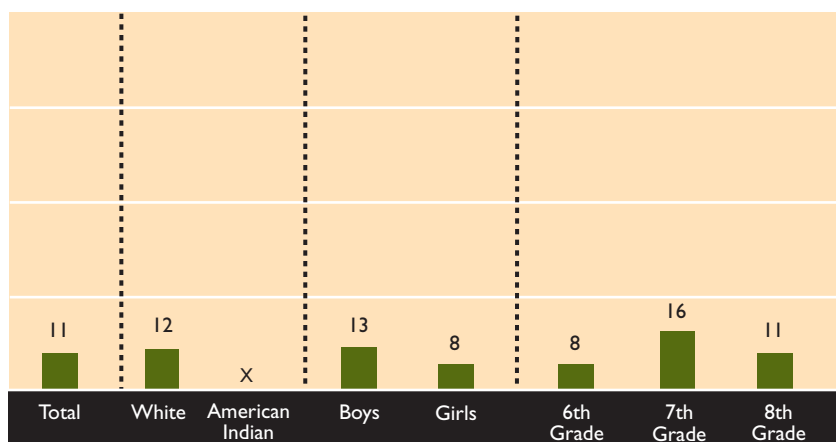
YEAR (sample size)
2000 (431)
2003 (473)



REPORT ON KEY QUESTIONS

TABLE 17.
Percent of current middle school student smokers who have ever participated in a program to help them quit using tobacco.

YEAR (sample size)
■ 2003 (106)



X = too small to report

TABLE 18.
Percent of current high school student smokers who have ever participated in a program to help them quit using tobacco.

YEAR (sample size)
■ 2003 (486)

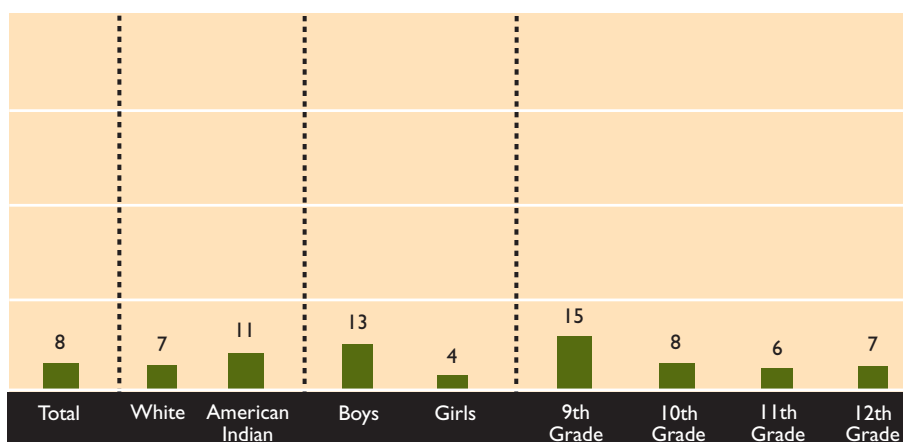
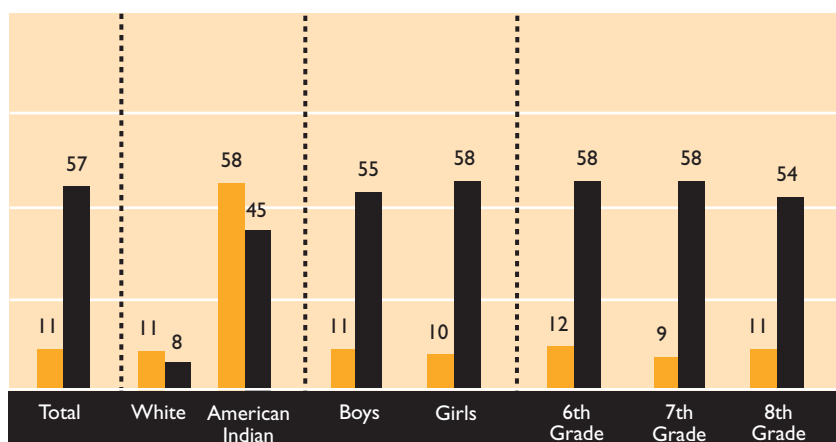


TABLE 19.
Percent of middle school students who attend a school that has a special group or class for students who want to quit using tobacco.

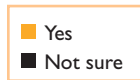
■ Yes
■ Not sure

N=2413

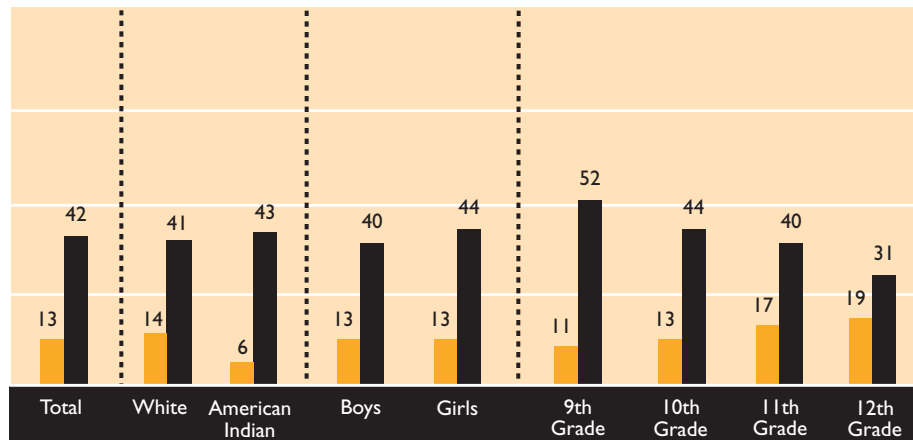


REPORT ON KEY QUESTIONS

TABLE 20.
Percent of high school students who attend a school that has a special group or class for students who want to quit using tobacco.



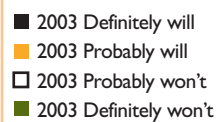
N=1887



How many young people in South Dakota think that they will smoke in the future?

The intent to smoke in the future is one indicator of risk for current non-smokers to begin smoking or for experimental smokers to become regular tobacco users (Wakefield 2004). The majority of middle school students (72%) and high school students (56%) believe that they will definitely not be smoking five years from now (see Tables 21 and 22). Only 4% of high school students who have never smoked think they will try a cigarette soon (see Tables 23 and 24).

TABLE 21.
Percent of middle school students who think they will be smoking 5 years from now.



N=2454

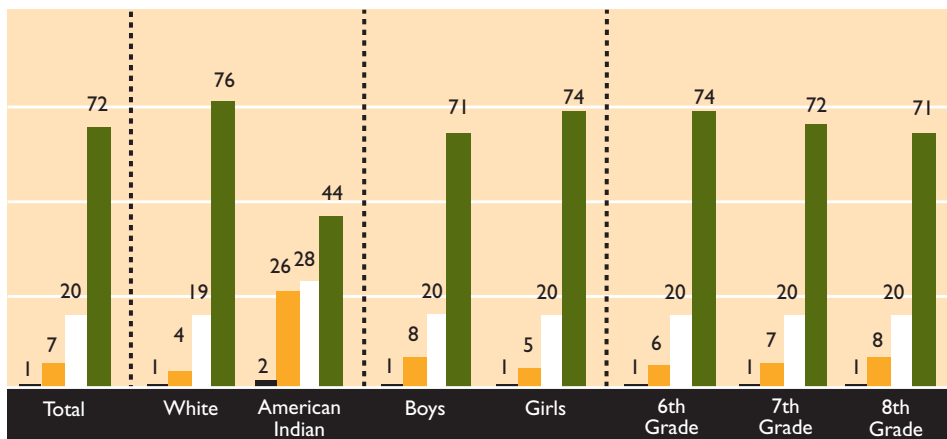
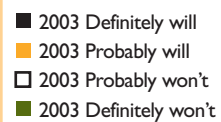
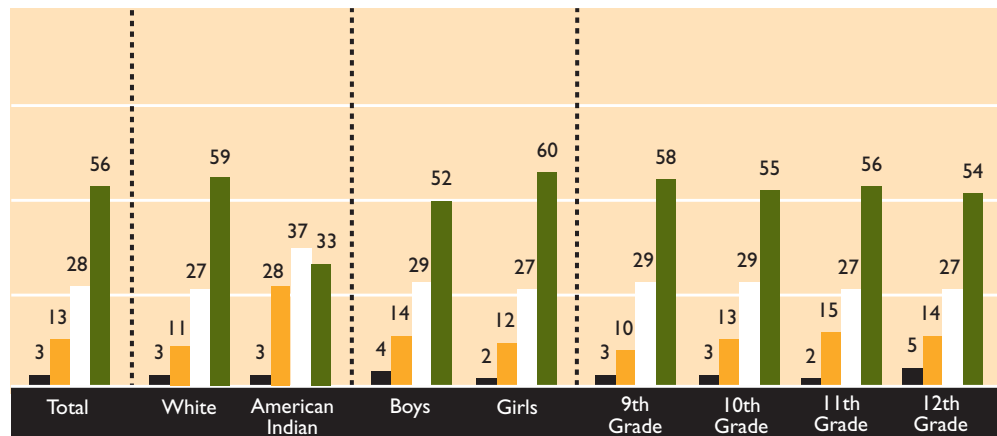


TABLE 22.
Percent of high school students who think they will be smoking 5 years from now.



N=1893



REPORT ON KEY QUESTIONS

TABLE 23.
Percent of middle school students who have never smoked who will not try a cigarette soon.

YEAR (sample size)
■ 2003 (1778)

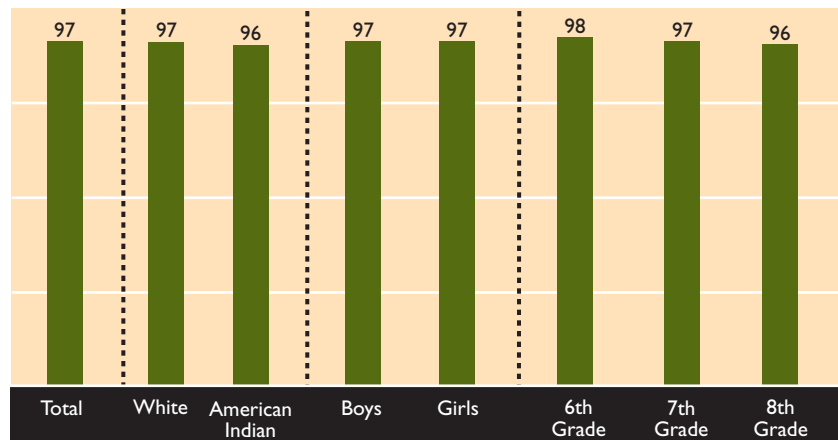
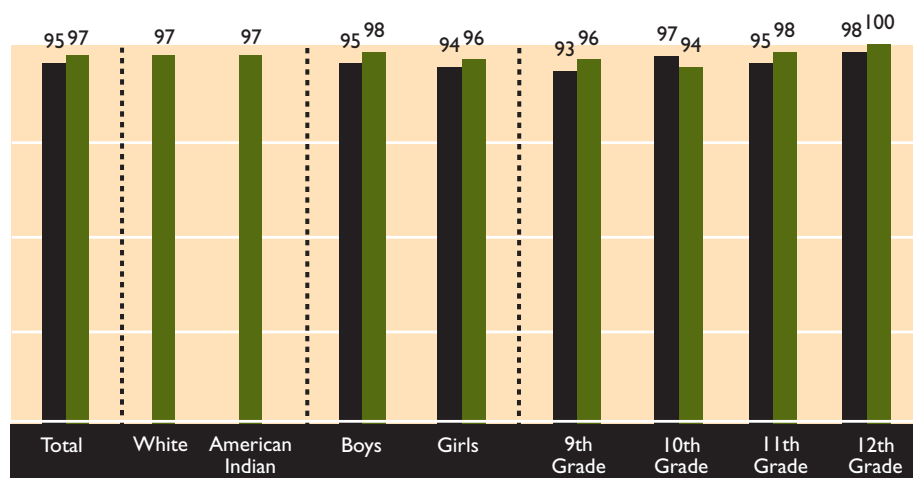


TABLE 24.
Percent of high school students who have never smoked who will not try a cigarette soon.

YEAR (sample size)
■ 2000 (526)
■ 2003 (732)

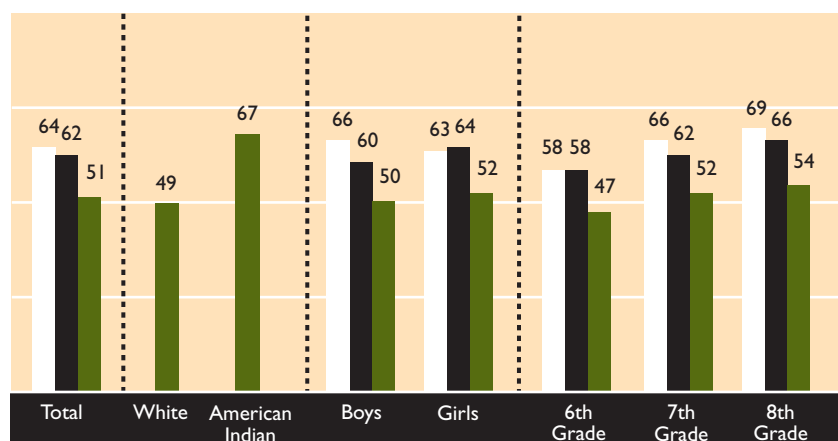


How many young people in South Dakota are regularly exposed to environmental tobacco smoke?

There are clearly documented health risks caused by exposure to environmental tobacco smoke. The majority of middle school and high school students are exposed to environmental tobacco smoke each week (see Tables 25 and 26). Students that have never smoked are less likely to be exposed to someone else's tobacco smoke. Students who are current smokers are more likely to live in a home with someone who smokes (see Table 27).

TABLE 25.
Percent of middle school students who were in the same room with someone who was smoking cigarettes or rode in a car with someone who was smoking a cigarette (1 or more days during the past 7 days).

YEAR (sample size)
□ 1999 (1956)
■ 2001 (2405)
■ 2003 (2445)



REPORT ON KEY QUESTIONS

TABLE 26.
Percent of high school students who were in the same room with someone who was smoking cigarettes or rode in a car with someone who was smoking a cigarette (1 or more days during the past 7 days).

YEAR (sample size)
 2000 (1507)
 2003 (1902)

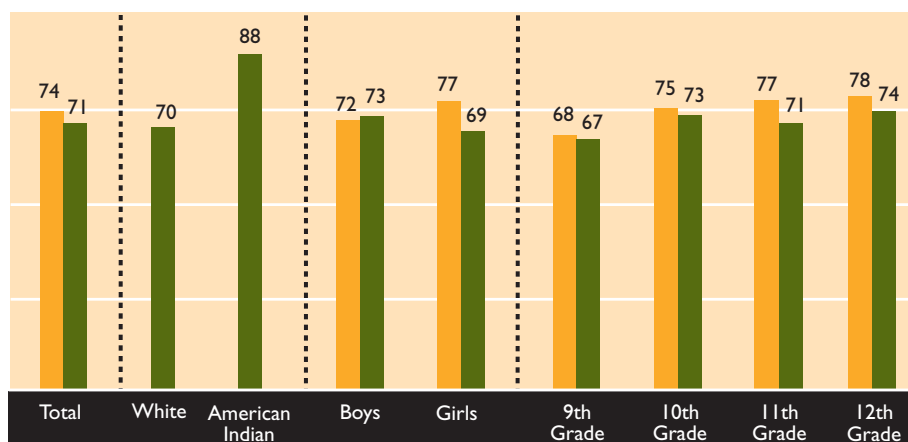
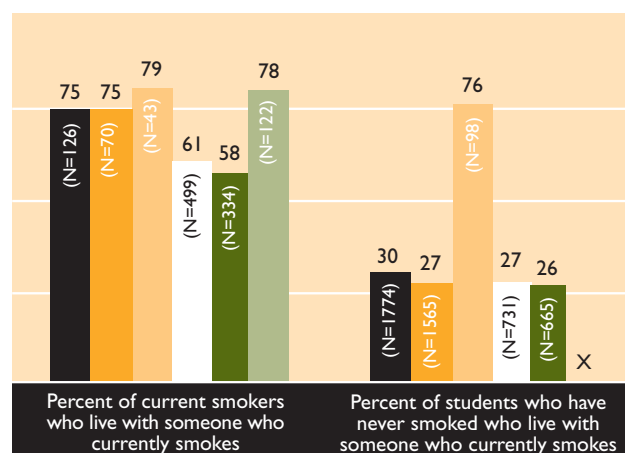


TABLE 27.
Relationship of smoking status to living with someone who smokes.

■ Middle School
 ■ Middle School White
 ■ Middle School American Indian
 □ High School
 ■ High School White
 ■ High School American Indian



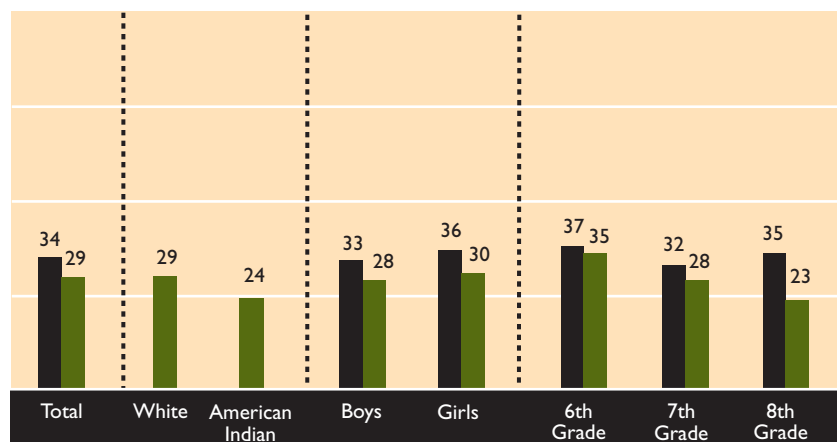
X = too small to report

How many students practice saying “no” to tobacco use in school?

Teaching refusal skills is one prevention strategy included in many tobacco use prevention curricula. Less than half of students at both the middle school and high school level report practicing saying “no” to tobacco (see Tables 28 and 29).

TABLE 28.
Percent of middle school students who practiced saying “no” in any class this year.

YEAR (sample size)
 1999 (not available)
 2001 (2408)
 2003 (2412)

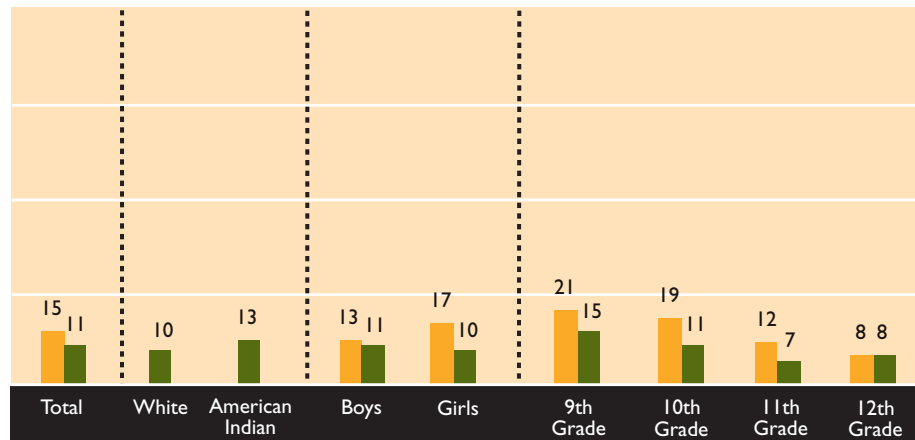


REPORT ON KEY QUESTIONS

TABLE 29.

Percent of high school students who practiced saying “no” in any class this year.

YEAR (sample size)
 2000 (1507)
 2003 (1871)



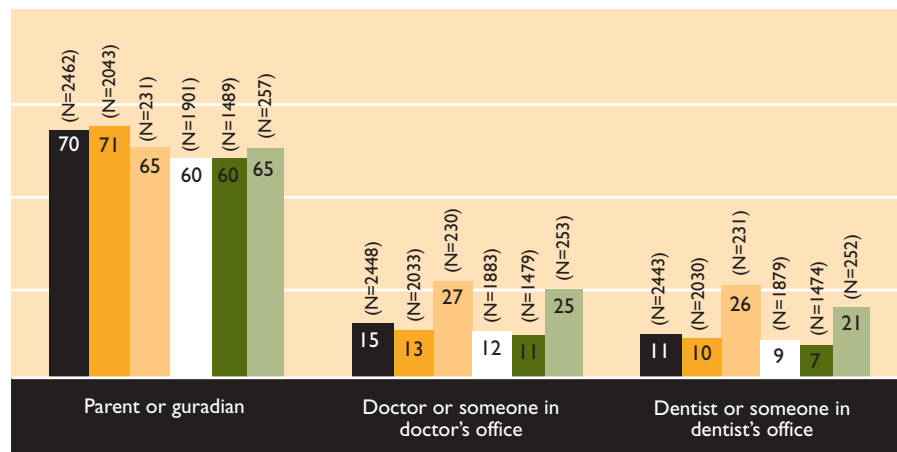
How many students hear messages about the risks of tobacco use from their parents, health care providers, commercials on TV, radio, or the Internet?

Counter-marketing campaigns, parental influence, and efforts to change social norms about tobacco use are components of effective comprehensive tobacco prevention efforts. The majority of both middle school and high school students report that a parent or guardian has discussed the dangers of tobacco use with them during the past 12 months (See Table 30). However, among high school students, 2 in 5 report that this has never occurred, and less than 1 in 5 report that this type of discussion occurs rarely.

TABLE 30.

Percent of students who remember having heard a message about the dangers of tobacco use from their parents or guardians or health care providers during the past 12 months.

■ Middle School
 ■ Middle School White
 ■ Middle School American Indian
 □ High School
 ■ High School White
 ■ High School American Indian



The majority of both middle school and high school students recall having seen or heard at least one anti-tobacco commercial during the past 30 days (see Tables 31 and 32). Nearly 40% report seeing or hearing an anti-tobacco message almost every day.

Most students do not recall having anyone in their doctor or dentist's office talk with them about the dangers of tobacco use during the past 12 months.

REPORT ON KEY QUESTIONS

TABLE 31.
Percent of middle school students who have seen or heard anti-smoking commercials during the past 30 days.

YEAR (sample size)
■ 2003 (2411)

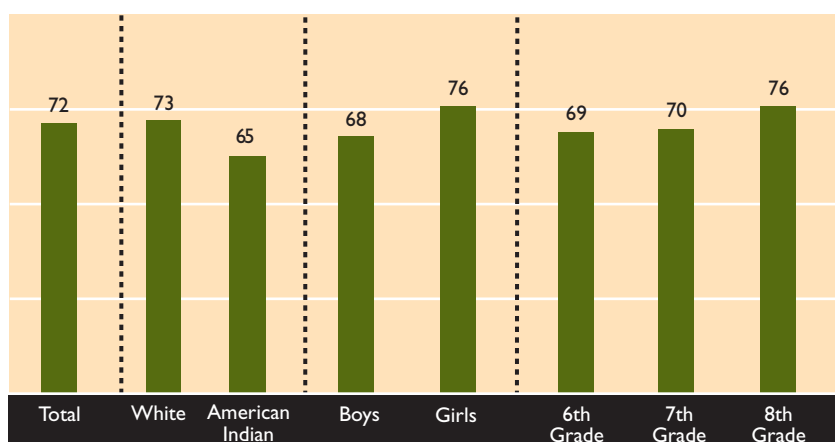
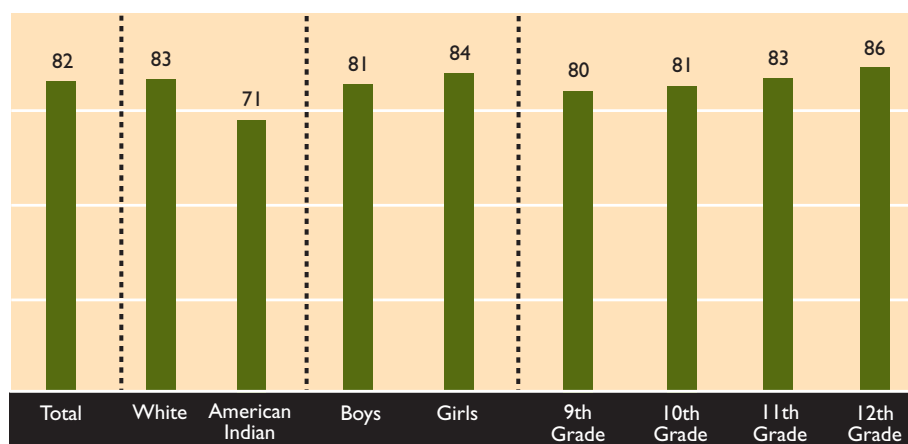


TABLE 32.
Percent of high school students who have seen or heard anti-smoking commercials during the past 30 days.

YEAR (sample size)
■ 2003 (1876)



CITATIONS

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METHODOLOGY

The SDYTS is primarily a surveillance instrument that has some utility for evaluation purposes. Surveillance is the continuous monitoring or routine collection of data on various factors over regular intervals of time. Evaluation is the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness and/or inform decisions about future program development. The SDYTS findings should be used with care for program evaluation purposes because they constitute only one element of an evaluation of statewide and local efforts to prevent and control tobacco use.

SAMPLING DESIGN

A two-stage cluster sample design was used to produce a representative sample of students in South Dakota. For the Middle School sample, the first-stage sampling frame consisted of all public schools containing any of grades 6-8. Thirty-nine schools were selected with probability proportional to school enrollment size. The second-stage sampling consisted of systematic equal probability sampling of classes from each school that participated in the survey. All second period classes in the selected schools were included in the sampling frame. All students in the selected classes were eligible to participate in the survey. Passive parental consent was used and all students were provided information about the purpose of the survey and given the option to choose not to participate. Thirty-five of the thirty-nine sample schools (89.7%) participated and 2482 of 2787 sampled students (89%) completed useable questionnaires. The overall response rate was 79.9% (89.7% x 89%).

A similar design was used at the high school level. The first-stage sampling frame consisted of all public schools containing any of grades 9-12. Twenty-five schools were selected with probability proportional to school enrollment size. The second-stage sampling consisted of systematic equal probability sampling of classes from each school that participated in the survey. All second period classes in the selected schools were included in the sampling frame. All students in the selected classes were eligible to participate in the survey. Passive parental consent was used and all students were provided information about the purpose of the survey and given the option to choose not to participate. Twenty-one of the twenty-five sample schools (84%) participated and 1920 of 2225 sampled students (86.3%) completed useable questionnaires. The overall response rate was 72.5% (86.3% x 84%).

The CDC assigned a weight associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of response. The weighting procedure is a method that helps ensure, based on a set of assumptions, that the sample of students completing the SDYTS actually matches the population of students in South Dakota. The weight used for estimation is determined by the equation:

$$W=W1*W2*f1*f2*f3*f4$$

W1=the inverse probability of selecting the school
W2=the inverse probability of selecting the classroom within the school

f1=a school-level nonresponse adjustment factor calculated by school size category (small, medium, large)

f2=a class adjustment factor calculated by school

f3=a student-level nonresponse adjustment factor calculated by class

f4=a post stratification adjustment factor calculated by gender and grade

The CDC believe that the weighted results used to prepare this report can be used with confidence as a surveillance instrument to make important inferences concerning tobacco use risk behaviors of all regular public school students.

SAMPLING ERRORS

Sampling errors occur when estimates are derived from a sample rather than a census of the population. The sample used for a particular survey is only one of a large number of possible samples of the same size and design that could have been selected. Even if the same questionnaire and instructions were used, the estimates from each sample would differ from the others. This difference, termed sampling error, occurs by chance, and its variability is measured by the standard error associated with a particular survey.

The CDC has calculated confidence intervals for responses to each item. These confidence intervals are generated by a process that captures the true population percentage 95% of the time.

The data presented in this report take the sampling error and confidence interval into account whenever differences are present between males and females, grade levels or over time. In many cases, the differences that are present may be due to a sampling error. The authors have been careful to note this possibility when differences occur.

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